

## Contents

### Volume 255 (1991)

#### *Research Papers*

Enhanced pyrimidine dimer removal in repair-proficient murine fibroblasts transformed with the <i>denV</i> gene of bacteriophage T4	1
D.F. Kusewitt, R.D. Ley and E.E. Henderson (U.S.A.)	
Human cells (normal and ataxia telangiectasia) transfected with pR plasmid are hypersensitive to DNA strand-breaking agents	11
A. Antonelli, R. Elli, L. Marcucci, R. Bosi, D. Kobal and P. Petrinelli (Italy)	
Site-directed deletion mutagenesis within the T4 endonuclease V gene: dispensable sequences within putative loop regions	19
M.L. Dodson, M.A. Prince, W.F. Anderson and R.S. Lloyd (U.S.A.)	
Alteration of a nuclease in Fanconi anemia	31
K. Sakaguchi, P.V. Harris, C. Ryan, M. Buchwald and J.B. Boyd (U.S.A., Canada)	
Survival of M13mp18 gapped duplex DNA as a function of gap length	39
A. Hartke and D. Schulte-Frohlinde (F.R.G.)	
Induction and disappearance of DNA single-strand breaks in human B and T lymphocytes after exposure to ethylnitrosourea	49
M.E.T.I. Boerrigter and J. Vijg (The Netherlands)	
Differential repair of 1-β-D-arabinofuranosylcytosine-detectable sites in DNA of human fibroblasts exposed to ultraviolet light and 4-nitroquinoline 1-oxide	57
R. Mirzayans and M.C. Paterson (Canada)	
Preferential repair of DNA damage on the transcribed strand of the human metallothionein genes requires DNA polymerase II	67
S.A. Leadon and D.A. Lawrence (U.S.A.)	
P transposition in <i>Drosophila</i> provides a new tool for analyzing postreplication repair and double-strand break repair	79
S.S. Banga, A. Velazquez and J.B. Boyd (U.S.A.)	
Theoretical and experimental measures of DNA helix stability and their relation to sequence specific repair of <i>O<sup>6</sup></i> -ethylguanine lesions	89
C.K. Foley, L.G. Pedersen, T.A. Darden, B.W. Glickman and M.W. Anderson (U.S.A., Canada)	
<i>RecA</i> -dependent increased precise excision of <i>Tn10</i> in <i>Salmonella typhimurium</i>	95
M.S. Levy, P. Pomposiello and R. Nagel (Argentina)	

#### *Meeting Report*

Recent advances in DNA repair: A report of a meeting of the British Photobiology Society and the DNA Repair Network. London, 14 and 15 December 1990	101
S. Sedgwick and A. Collins (Great Britain)	

#### *Research Papers*

Cross-sensitivity of γ-ray-sensitive hamster mutants to cross-linking agents	111
K. Caldecott and P. Jeggo (Great Britain)	
Gene-specific DNA repair in terminally differentiating rat myoblasts	123
L. Ho and P.C. Hanawalt (U.S.A.)	
<i>Drosophila</i> methyltransferase activity and the repair of alkylated DNA	143
S.N. Guzder, M.R. Kelley and W.A. Deutsch (U.S.A.)	
Effect of specific enzyme inhibitors on replication, total genome DNA repair and on gene-specific DNA repair after UV irradiation in CHO cells	155
J.C. Jones, T. Stevensner, M.R. Mattern and V.A. Bohr (U.S.A.)	
Does trans-lesion synthesis explain the UV-radiation resistance of DNA synthesis in <i>C. elegans</i> embryos?	163
P. Hartman, J. Reddy and B.-A. Svendsen (U.S.A.)	
The origin of <i>O<sup>6</sup></i> -methylguanine-DNA methyltransferase in Chinese hamster ovary cells transfected with human DNA	175
K. Tano, S. Shiota, J.S. Remack, T.P. Brent, D.D. Bigner and S. Mitra (U.S.A.)	

The genetic defect in the Chinese hamster ovary cell mutant UV61 permits moderate selective repair of cyclobutane pyrimidine dimers in an expressed gene L. Lommel and P.C. Hanawalt (U.S.A.)	183
Oxidative stress effects on conjugational recombination and mutation in catalase-deficient <i>Escherichia coli</i> C.M. DeRose and H.G. Claycamp (U.S.A.)	193
Xeroderma pigmentosum complementation group H falls into complementation group D W. Vermeulen, M. Stefanini, S. Giliani, J.H.J. Hoeijmakers and D. Bootsma (The Netherlands, Italy)	201
<i>Announcement</i>	209
<b>Research Papers</b>	
The induction and repair of (6-4) photoproducts in <i>Neurospora crassa</i> T.I. Baker, R.J. Radloff, C.E. Cords, S.R. Engel and D.L. Mitchell (U.S.A.)	211
Elevated levels of DNA double-strand breaks (dsb) in restriction endonuclease-treated xrs5 cells correlate with the reduced capacity to repair dsb N.D. Costa and P.E. Bryant (Great Britain)	219
The Walker 256 carcinoma: a cell type inherently sensitive only to those difunctional agents that can form DNA interstrand crosslinks R.J. Knox, D.A. Lydall, F. Friedlos, C. Basham, C.J. Rawlings and J.J. Roberts (Great Britain)	227
DNA repair and mutant frequency in schizophrenia G.K. Magin, S.H. Robison, N. Breslin, R.J. Wyatt and R.C. Alexander (U.S.A.)	241
Two expressed human genes sustain slightly more DNA damage after alkylating agent treatment than an inactive gene J.D. Bartlett, D.A. Scicchitano and S.H. Robison (U.S.A.)	247
Effect of UV light on sister-chromatid exchanges, activation of alternative sites of replicon initiation and thymidine incorporation in CHO AA8, UV61 and UV5 cells S.A. Taft, S.Y. Ling and T.D. Griffiths (U.S.A.)	257
Cross-adaptive response in <i>Escherichia coli</i> caused by pretreatment with H <sub>2</sub> O <sub>2</sub> against formaldehyde and other aldehyde compounds T. Nunoshiba, M. Hashimoto and H. Nishioka (Japan)	265
Enhancement of repair of UV-irradiated plasmids in cultured fish cells by fluorescent light preillumination and growth arrest H. Mitani, S. Yasuhira, J.-I. Komura and A. Shima (Japan)	273
Evidence for defective repair of cyclobutane pyrimidine dimers with normal repair of other DNA photoproducts in a transcriptionally active gene transfected into Cockayne syndrome cells S.F. Barrett, J.H. Robbins, R.E. Tarone and K.H. Kraemer (U.S.A.)	281
<i>Contents, Vol. 255 (1991)</i>	293

